

CLAIMS

1. A file recording apparatus for recording data onto a recording medium which is written in clusters and erased in blocks each composed of a predetermined number of contiguous clusters, the
5 file recording apparatus comprising:

a receiving unit operable to receive a request for writing data of a specific one of a plurality of files onto the recording medium;

10 a plurality of file buffers each for a different one of the files;

a data accumulating unit operable to accumulate the data requested to be written, in one of the file buffers corresponding to the specific file;

15 a judging unit operable to judge whether data having been accumulated by the data accumulating unit is no smaller than a block size; and

a writing unit operable, if the judging unit judges affirmatively, to extract a block of data from the accumulated
20 data and to write the extracted data into a free block of the recording medium.

2. The file recording apparatus according to Claim 1, wherein

the judging unit judges affirmatively if data having been
25 accumulated in a specific one of the file buffers to which the data accumulating unit most recently accumulated data is no smaller than the block size, and

the writing unit extracts a block of data from a top of

the specific file buffer, and writes the extracted data to the free block of the recording medium.

3. The file recording apparatus according to Claim 1, wherein
5 the judging unit judges affirmatively when a total of quotients each calculated by dividing a size of data accumulated in a respective one of the file buffers by a cluster size is no smaller than the predetermined number, and

10 the writing unit extracts data from the respective file buffers cluster by cluster until the predetermined number of clusters is reached, and writes the extracted data to the free block of the recording medium.

4. The file recording apparatus according to Claim 1, further
15 comprising:

an erasing unit operable to erase the free block before the writing unit writes the extracted data to the free block.

5. A control method for a file recording apparatus that includes
20 a plurality of file buffers each for a different one of a plurality of files and that records data onto a recording medium, the recording medium being written in clusters and erased in blocks each composed of a predetermined number of contiguous clusters, the method comprising:

25 a receiving step of receiving a request for writing data of a specific one of a plurality of files onto the recording medium;

a data accumulating step of accumulating the data requested

to be written, in one of the file buffers corresponding to the specific file;

a judging step of judging whether data having been accumulated in the data accumulating step is no smaller than
5 a block size; and

a writing step of writing, if the judging step results in the affirmative, to extract a block of data from the accumulated data and to write the extracted data into a free block of the recording medium.

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6. A program for execution by a file recording apparatus that includes a plurality of file buffers each for a different one of a plurality of files and that records data onto a recording medium, the recording medium being written in clusters and erased
15 in blocks each composed of a predetermined number of contiguous clusters, the program comprising code operable to cause the file recording apparatus to perform:

a receiving step of receiving a request for writing data of a specific one of a plurality of files onto the recording
20 medium;

a data accumulating step of accumulating the data requested to be written, in one of the file buffers corresponding to the specific file;

a judging step of judging whether data having been
25 accumulated in the data accumulating step is no smaller than a block size; and

a writing step of writing, if the judging step results in the affirmative, to extract a block of data from the accumulated

data and to write the extracted data into a free block of the recording medium.

7. A program for execution by a file recording apparatus that includes a driver data buffer and that records data onto a recording medium, the recording medium being written in clusters and erased in blocks each composed of a predetermined number of contiguous clusters, the program comprising code operable to cause the file recording apparatus to perform:

10 a receiving step of receiving a write request that specifies a write address on the recording medium at which data is requested to be written;

15 a first judging step of judging, if the driver data buffer is not empty, whether the write address specified for the data requested to be written is contiguous to a write address specified for data stored on the driver data buffer;

 a data accumulating step of accumulating, if the first judging step results in the affirmative, in the driver data buffer the data requested to be written;

20 a second judging step of judging whether a write address specified for data accumulated in the driver data buffer falls on a block boundary of the recording medium; and

25 a write step of writing, if the second judging step results in the affirmative, a part of the accumulated data from a top of the driver data buffer up to a point corresponding to the block boundary, onto the recording medium.

8. The program according to Claim 7, wherein the program comprises:

a filter driver of the recording medium.